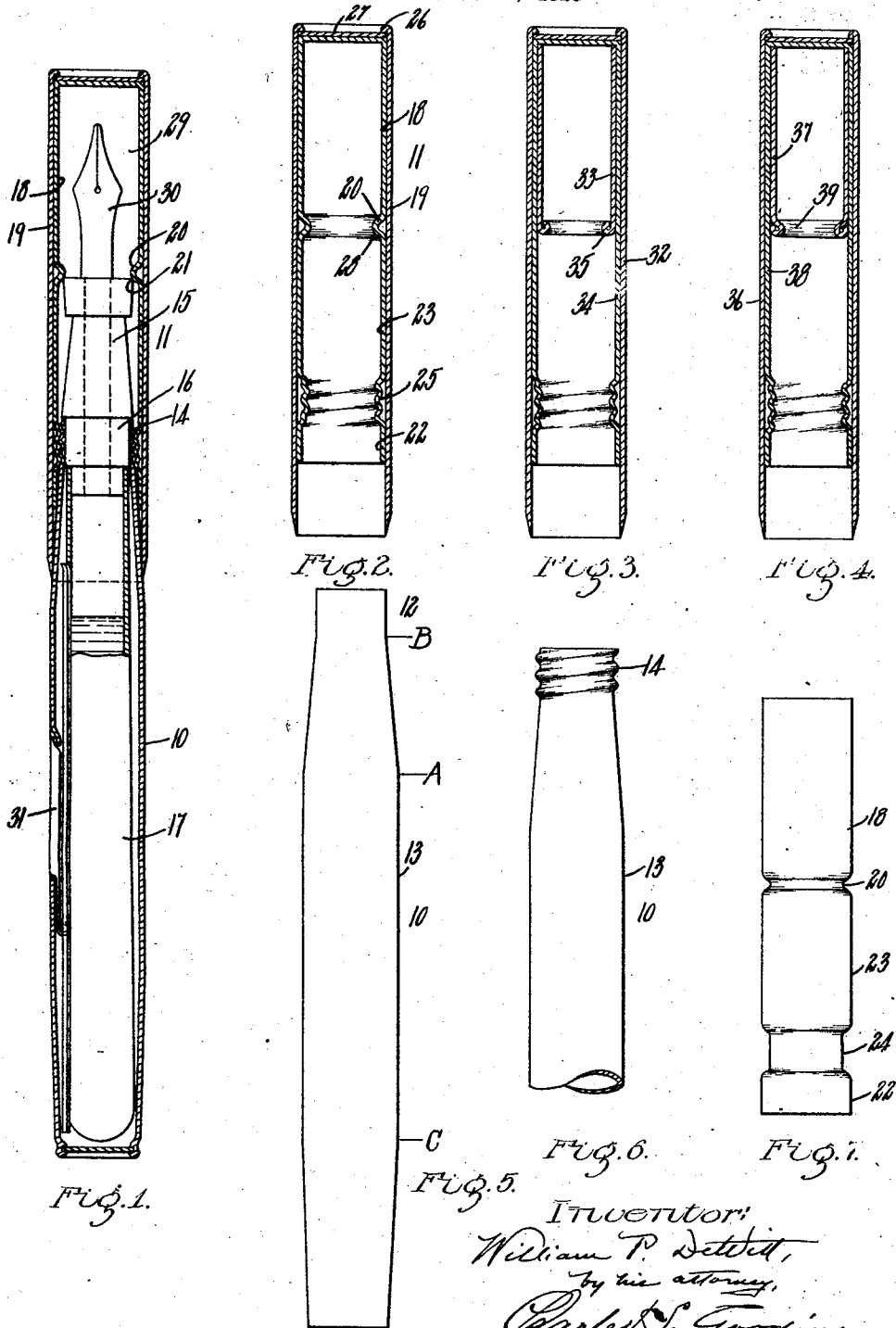


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W. P. DE WITT
FOUNTAIN PEN CAP

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UNITED STATES PATENT OFFICE.

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FOUNTAIN-PEN CAP.

Application filed March 24, 1923. Serial No. 627,351.

To all whom it may concern:

Be it known that I, WILLIAM P. DE WITT, a citizen of the United States, residing at Somerville, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Fountain-Pen Caps, of which the following is a specification.

This invention relates particularly to the cap of a fountain pen.

One object of the invention is to provide a fountain pen cap which can be made cheaply and accurately by special machines constructed for the purpose and which will cause the parts to be accurately and rigidly secured together when the cap is screwed on to the casing.

The invention contemplates, together with other advantageous construction, making the cap in three parts comprising an inner shell, an outer shell and an intermediate shell, the inner shell having preferably formed thereon an annular flange adapted to engage the front end of the pen section, while the intermediate section comprises a screw-threaded portion intermediate two cylindrical bore portions and adapted to engage a screw-threaded portion on the casing or barrel of the pen.

Another object of the invention which is secured by the construction hereinbefore set forth is that the inner shell, which is entirely surrounded by the outer shell, and also the intermediate shell of the cap, may be made of some cheap metal that will resist the corrosive action of ink, while the outer shell which is made for ornament, can be constructed of expensive metal, such as gold or silver, the result attained being more practicable than if the whole cap were made of gold or silver.

The invention consists in the improved fountain pen cap, set forth in the following specification and particularly pointed out in the claims thereof.

Referring to the drawings:

Figure 1 is a longitudinal sectional elevation of my improved fountain pen casing and cap.

Fig. 2 is a longitudinal sectional elevation of a cap constructed in accordance with my invention.

Fig. 3 is a longitudinal sectional elevation of a modified form of cap.

Fig. 4 is a sectional elevation of still another modified form of cap.

Fig. 5 is a front elevation of a pen casing constructed in accordance with my invention prior to the screw thread having been formed thereon.

Fig. 6 is a front elevation of the front end portion of a pen casing constructed in accordance with my invention.

Fig. 7 is a front elevation of a cap inner shell such as illustrated in Fig. 2 in section, but with the screw thread omitted therefrom, illustrating the form of the inner shell prior to the formation of the screw thread thereon.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, referring to Figs. 1 and 2, 10 is a casing for a fountain pen embodying a portion of my invention and 11 is a cap therefor. The casing 10 embodies a cylindrical front end portion 12, a cylindrical body portion 13 and a frusto-conical portion extending from line A to the line B and connecting the two cylindrical portions 12 and 13 to each other. The cylindrical portion 12 is of smaller diameter than the cylindrical portion 13.

The cylindrical portion 12 is provided with a screw-thread 14 as seen in Fig. 1, said casing also being preferably tapered from the line C to the rear end thereof. A pen section 15 has a forced fit at the rear end 16 thereof in the front screw-threaded end of the casing 10, and said pen section has an ink sack 17 attached to its rear end.

Referring to Fig. 2, it will be seen that an inner shell 18 is surrounded by an outer shell 19, both of these shells being tubular, the inner shell having an annular inwardly projecting flange 20 thereon adapted to abut against the front outer edge 21 of the pen section 15.

The shell 18 has a cylindrical front end portion 22 and a cylindrical intermediate

portion 23, both of these portions having a smooth bore and between the portions 22 and 23 the shell 18 is provided with a depressed annular portion 24, see Fig. 7, which is screw-threaded at 25 as illustrated in Fig. 2. The rear end of the outer shell 19 is closed by providing a flange 26 thereon which engages and holds in position a disc 27. The outer shell is preferably formed of precious metal, while the inner shell is formed of a cheaper, harder and more durable metal. It will be noted that the annular flange 20 is provided with an inclined face 28 which constitutes a seat and when the parts are assembled as shown in Fig. 1, this seat bears against the outer edge of the front end of the pen section 15, forming a line contact therewith, thus entirely enclosing and providing an air tight chamber 29 in the cap 11 to receive a pen 30.

The particular class of fountain pen shown in Fig. 1 is of that character in which an ink sack 17 is provided which is operated to feed the ink thereinto by any suitable means such as a lever 31. It will be seen that the outer diameter of the cap 11 is practically the same as the outer diameter of the casing 10.

In Fig. 3 a modified form of cap is illustrated in which there is embodied an outer shell 32, an inner shell 33 and an intermediate shell 34. In this form of my invention the intermediate shell 34 is substantially the same as the inner shell 23, but the annular flange 20 is omitted therefrom and is replaced by means of an annular flange 35 on the front end of the shell 33, otherwise the cap is the same, as the cap illustrated in Fig. 2 and the functions performed are the same, except that the flange 35 performs the function of the flange 20 in Fig. 2.

In Fig. 4 a modified form of the cap is illustrated in which there is an outer shell 36, an inner shell 37 and an intermediate shell 38. The inner shell 37 has an annular flange 39 upon its front end formed in a different manner than in the inner shell 33 illustrated in Fig. 3, that is, in Fig. 4 the flange 39 is formed by turning the same outwardly while in Fig. 3 the flange 35 is formed by turning the flange inwardly. The operation of and the function performed by the different parts of the cap 36 are, however, the same as in the form of my invention illustrated in Fig. 3.

In Fig. 6 a portion of the casing is illustrated in its finished form, that is, with the screw thread 14 formed on the front cylindrical end thereof.

In Fig. 7 the form of the inner shell illustrated in its finished shape in Fig. 2 is illustrated for the purpose of illustrating the depressed annular portion 24 located between the two cylindrical smooth bored por-

tions 22 and 23 and illustrating the appearance of the inner shell, Fig. 2 before the screw thread 25 is formed thereon.

The manner of using the device hereinbefore described is the same as in other fountain pens, that is, the cap is screwed on to the front end of the casing when the pen is not in use and unscrewed therefrom and placed upon the rear end of the casing when in use.

I claim:

1. A metal cap for a fountain pen having, in combination, an inner metal tubular shell having an interior screw thread for a portion of its length only and a smooth bore in front and at the rear of said screw-threaded portion and an outer tubular metal shell enclosing said inner shell and having a straight bore projecting for a substantial distance beyond the open end of said inner shell.

2. A metal cap for a fountain pen having, in combination, an inner metal tubular shell having an interior screw thread for a portion of its length only and a smooth bore in front and at the rear of said screw-threaded portion and an outer tubular metal shell enclosing said inner shell and having a straight bore projecting for a substantial distance beyond the open end of said inner shell, one of said shells constituting a cap.

3. A metal cap for a fountain pen having, in combination, an inner metal tubular shell having an annular depressed portion between its ends with an interior screw thread thereon and a smooth bore in front of said screw-threaded portion and at the rear of said screw-threaded portion and an outer tubular metal shell enclosing said inner shell and having a straight bore projecting for a substantial distance beyond the open end of said inner shell.

4. A metal cap for a fountain pen having, in combination, an inner metal tubular shell, an intermediate metal tubular shell enclosing said inner metal shell and projecting beyond the front end thereof and having an interior screw thread for a portion of its length only and an outer tubular metal shell enclosing said intermediate and inner shells and having a straight bore projecting for a substantial distance beyond the open end of said intermediate shell.

5. A metal cap for a fountain pen having, in combination, an inner metal tubular shell terminating at its front end in an annular flange, an intermediate tubular metal shell enclosing said inner metal shell and projecting beyond the front end thereof and having an interior screw thread for a portion of its length only and an outer tubular metal shell enclosing said inner and intermediate shells and having a straight bore projecting for a substantial distance beyond the open end of said intermediate shell.

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6. A metal cap for a fountain pen having, in combination, an inner metal tubular shell with an annular flange on the front end thereof, an intermediate tubular metal shell enclosing said inner shell and projecting 5 beyond the front end thereof and having an interior screw thread for a portion of its length only and a smooth bore in front of and at the rear of said screw-threaded por- tion and an outer tubular metal shell en- 10 closing said inner shell and intermediate shell and having a straight bore projecting for a substantial distance beyond the open end of said intermediate shell.

In testimony whereof I have hereunto set 15 my hand.

WILLIAM P. DE WITT.